Student Data Processing Information System At SMK Negeri 1 Lolofitu Moi

Lilis Suryani Laia
Universitas Imelda Medan

Article Info	ABSTRACT
	At Lolofitumoi State Vocational High School 1, student data processing is still conventional, namely student data processing is still recorded in ledgers, so the data collection process takes a very long time, resulting in data errors, difficulty searching for data and searching data that is not so fast. Thus causing delays in the presentation of data and reports when the data report is needed. Therefore, we need a computerized system that can be used by schools to facilitate the process of processing student data and presenting information effectively and efficiently. The type of research used by the author is descriptive qualitative using data collection methods, namely observation, literature study and interviews. The programming language used uses PHP and MySQL and this application test uses the Black Box method. From this research resulted in a student data management information system.

Corresponding Author:

Lilis Suryani Laia
Accounting Computerization, Universitas Imelda Medan,
Jl. Bilal No. 52 Kelurahan Pulo Brayan Darat I Kecamatan Medan Timur, Medan - Sumatera Utara.
Email: lilissuriani0508@gmail.com

1. INTRODUCTION

At present SMK Negeri 1 Lolofitu Moi Nias Selatan has several majors and an increasing number of new students, in the process of managing student data it is still going through long stages starting from recording data to searching data and storing data. Likewise, the process of preparing student data reports currently running at SMK Negeri 1 Lolofitu Moi Nias Selatan makes the process less effective and efficient.

2. RESEARCH METHOD

Data collection techniques in collecting information about the object of this research, namely:
Field Research (Field Research)
This research was carried out directly to the field to obtain the necessary data. In this case the author made direct observations about activities in SMK Negeri 1 Lolofitu Moi Nias.

Library Research
Research conducted based on the literature or theoretical in nature, which is done by reading books and lecture materials related to this research.

Interview

The author conducted direct interviews with teachers and students at SMKNegeri 1 Lolofitu Moi Nias.

Interview Method.

A. Data processing

Data is a description of facts, understanding instructions that can be conveyed and processed by humans or machines. Data processing is a form of processing data to make the data useful according to the desired results so that it can be used[9]. Data processing system is a system that performs data processing[10]. Functions and purposes of data processing as follows:

1. To produce and maintain accurate and up to date data records
2. Retrieving programs and data (input / input)
3. Store programs and data and make available for processing
4. Executes arithmetic and logical processes on stored data
5. Save intermediate results and final results of processing.
6. Print or display stored data or processing results.

B. Data Processing Cycle

Data processing with a computer is known as electronic data processing (PED) or electronic data processing (EDP). Data processing is a process of manipulating data into a form that is more useful and more meaningful, namely in the form of information. Thus information is the result of a data processing that provides a more meaningful form of fact.

Sources of information in the form of data that describe real events that have occurred at a certain time. This source needs to be processed through a cycle called the data processing life cycle.

C. Student Data Processing Information System

The student data information system can be interpreted as a process involving student data from data entry, as well as accessing data into useful and communicative information. While what is meant by data processing is all kinds of processing of data or combinations of various kinds of processing of data to make the data useful according to the desired results and can be used immediately. Data processing is the manipulation of data into a more meaningful form[11]. Thus it can be concluded that data processing is an activity carried out using input in the form of data and produces useful information for the purpose as planned.

D. Information Processing of Student Data at State Vocational School 1 Lolofitu Moi

School academic is a school administration as a manager and is responsible for collecting, managing, processing and storing as a business for managers (Data Base) both for the benefit of private schools and as official activities which in this case act as supervision. The definition of Academic in the Big Indonesian Dictionary is as follows:

1. Matters related to general education.
2. Is theoretical, theoretical, can not be directly practiced.
3. Regarding (related to) academic.

The activities that exist in the administration of SMKN 1 Lolofitu MOI, especially regarding student grades and student data and study schedules and regarding the rights and obligations of teachers and employees are part of the small community who are responsible and accountable to (To Level Management) those who are this is to the Principal as well as to the teachers and employees concerned as parties (Person to Person).

Effective and efficient school administration uses several approaches, namely:

1. Oriented towards goals, which means that school administration supports the achievement of educational goals
2. Oriented to the utilization of all resources (manpower, funds and facilities) in an efficient and effective manner.

3. The school management mechanism includes planning, organizing, implementing, and evaluating the results of school administration activities which must be carried out in a systematic and integrated manner. The Role of Administrative Guidelines for Secondary Schools.

Orderly and regular administration of secondary schools is necessary to improve the ability to manage education for school principals and teachers. This increase in ability will have positive results, namely increasing efficiency, quality and expansion of secondary school education.

To expedite the above activities to be more effective and efficient need adequate information. This information system at the secondary school level concerns two main things, namely data recording activities (recording system) and reporting (reporting system).

3. RESULTS AND DISCUSSION

System planning

After understanding the running system related to Student Data Processing, a new system can be designed. System design is needed to build a good new system that fits the needs based on the analysis that has been done. System design can be in the form of descriptions of what kind of system will be built, what systems must be changed or systems that need to be maintained, so that the student data processing process is more effective and efficient.

New System Review

With the existence of a new system that will replace the old system, it is hoped that it can support the productivity of student data processing at SMKN 1 Lolofitu Moi School. The new system that will run is computerized and systemized which is designed using a website. So that the process of processing student data can be done more easily and faster because it is systemized. Data storage designed on the new system uses a MySQL database. By using this database data storage will be more secure and the data capacity will also be more. The process of reporting and searching inventory data is also more effective and efficient.

Global Design

The system to be designed is a change from the current system. In operating this system also uses a computer, but in terms of using a computer here it is slightly different. This is because the application program that will be used for this new system uses the php application program.

To improve school performance, SMKN 1 Lolofitu Moi needs to design a Student Data Processing system. The cash flow system that will be designed is not much different from the current system, it's just that the development of this new system is more effective and efficient using the PHP application program.

Context diagrams

Context diagram is part of the level or level of the Data Flow Diagram (DFD). Generally, this diagram is used to define the context and system boundaries in a model. According to the explanation at repository.uksw.edu, a context diagram is a diagram that contains an overview of a system. The DFD can be seen in the following figures:
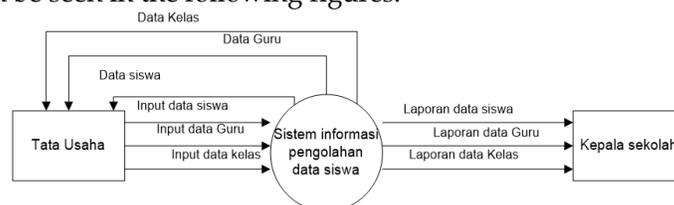

Figure 1 Context Diagram

Data Flow Diagrams Level 0

Data Flow diagram level 0 is the highest level of the DFD which describes all the inputs or outputs of the system.
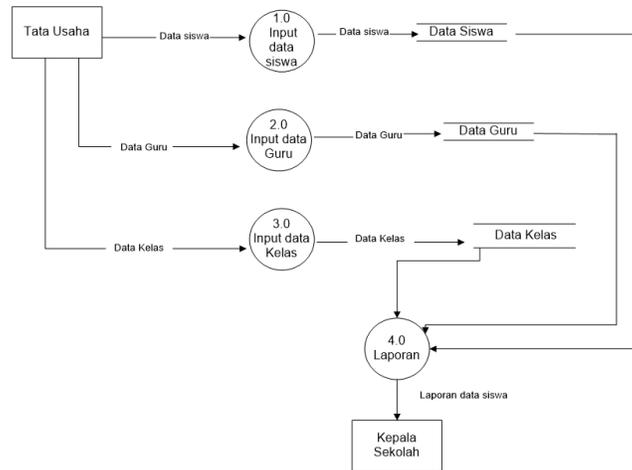

Figure 2 Level 0 Diagram

ERD

After designing the database, relationships between tables can be made as data requirements. This relationship describes the relationship between one table and another table. What is the relationship one to one, one to many and many to many.
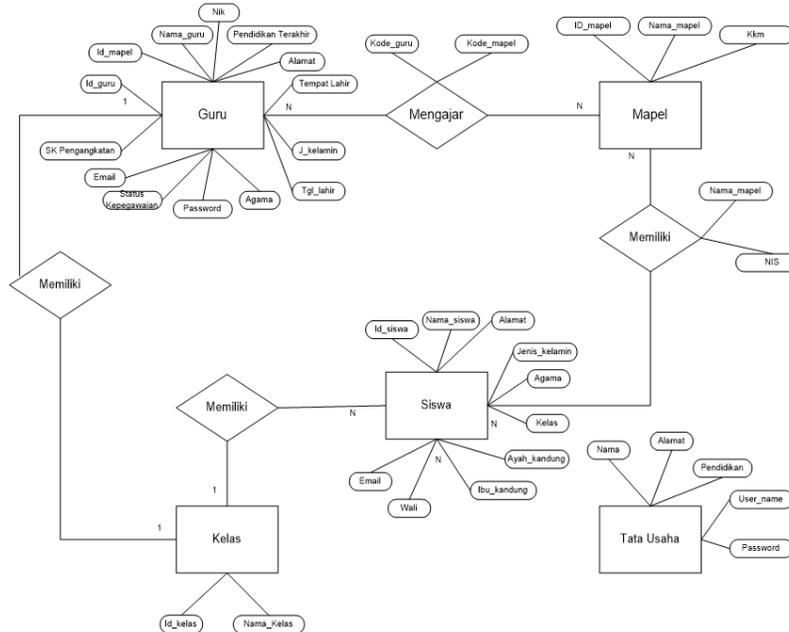

Figure 3 Table Relations

Detailed Design
Output Design

Output design is a final design process of data processing which can then produce information according to needs. Planning*output*of the Cash Flow Information System are:

1.   Designing Student Data output

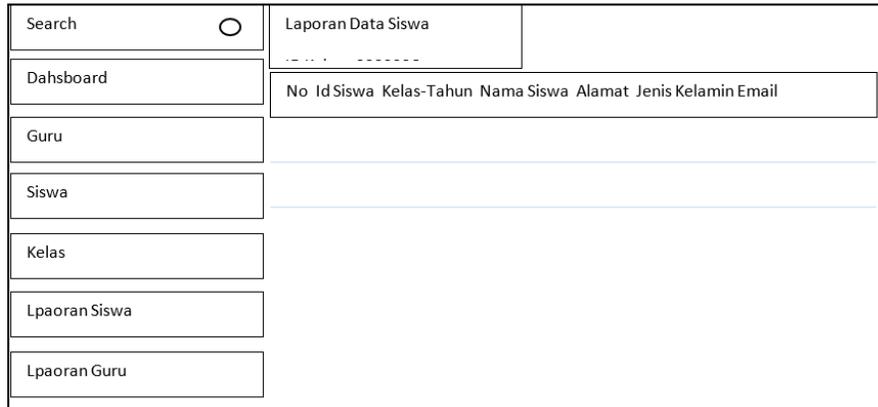Processing student data input is the most important thing in a school.

Figure 4 Design of Student Data input design

2. Student Data Processing Input Design

Below is the Student Data processing report which is the main report of this program planning:
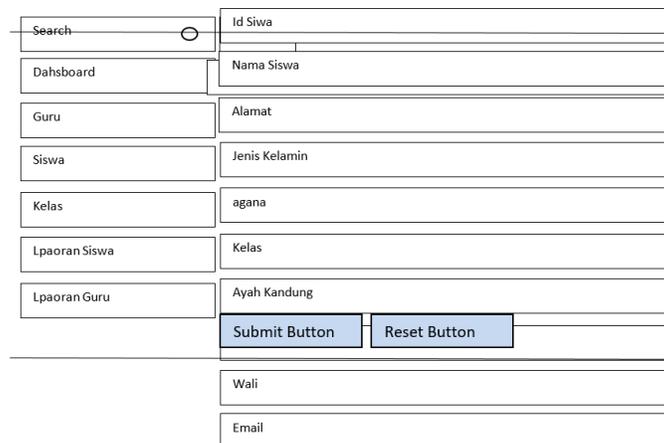

Figure 5 Design Student data input report

Input Design

The display of the Student Data Processing Information System application that the author designed consists of:

1. Administrative Login Display Design

In the Login Form there is a username, password and access. Access function to choose who is allowed to access this application. For example the Administration section.

Figure 6 Display of the Administrative Login Form
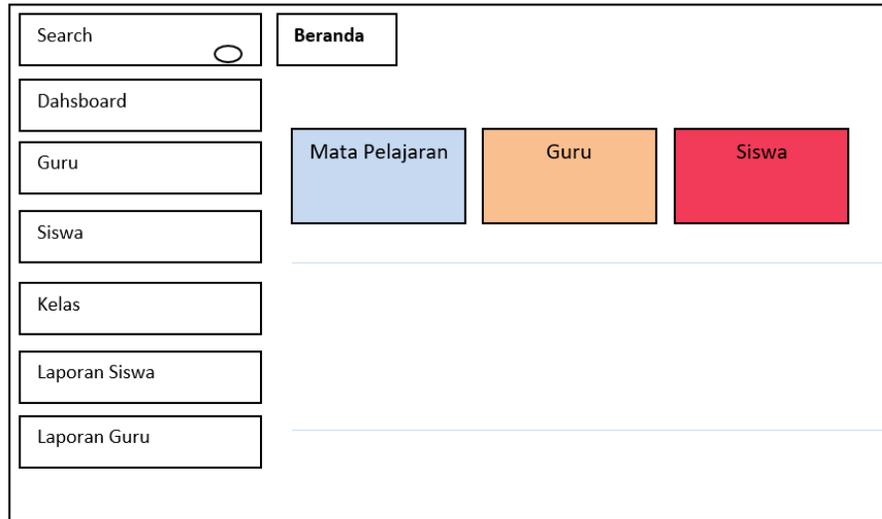
2. **Dahsboard Display Design**

Figure 7 Display Dashboard

4. CONCLUSION

Web-based student data processing information systems can be more efficient in distributing information, such as information on student data, teacher data, data and so on. Produce accurate and timely student data information. Can facilitate work in controlling data and accessing information, so that time and energy can be used optimally.

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